

AMENDMENT TO THE CLAIMS

No claims are amended in this response. However, all claims are shown herein for the Examiner's convenience.

1. (Original) A thermal switch for controlling the flow of heat between a heat source and a heat sink, the thermal switch comprising at least one nanostructure, wherein the thermal switch is configured to alternately form a path of high thermal conductance between the heat source and the heat sink via the at least one nanostructure, and a path of low thermal conductance between the heat source and the heat sink.

2. (Original) The thermal switch of claim 1, further comprising an actuator configured to alternately move between a first position to form the path of high thermal conductance and a second position to form the path of low thermal conductance.

3. (Original) The thermal switch of claim 2, wherein the actuator is deflectable to alternately deflect between the first position in which the actuator contacts the at least one nanostructure to form the path of high thermal conductance and the second position in which the actuator is spaced from the at least one nanostructure to form the path of low thermal conductance.

4. (Original) The thermal switch of claim 3, wherein the actuator comprises an electrostatic transducer that deflects to the first position upon application of a voltage to the transducer.

5. (Original) The thermal switch of claim 3, wherein the actuator comprises a piezoelectric transducer that deflects to the first position upon application of a voltage to the transducer.

6. (Original) The thermal switch of claim 1, wherein the at least one

nanostructure comprises a bundle of carbon nanotubes.

7. (Original) The thermal switch of claim 6, wherein the at least one nanostructure further comprises a matrix material between the carbon nanotubes.

8. (Original) The thermal switch of claim 1, further comprising a fluid-tight cavity interposed between the heat sink and the heat source, the at least one nanostructure being disposed in the cavity, and the cavity containing an insulating gas to increase the thermal resistance of the switch whenever the switch is activated to establish the path of low thermal conductance.

9. (Original) The thermal switch of claim 1, further comprising a fluid tight cavity interposed between the heat sink and the heat source, the at least one nanostructure being disposed in the cavity, and the cavity being evacuated to increase the thermal resistance of the switch whenever the switch is activated to establish the path of low thermal conductance.